

ment of Zoology, Dr. J. N. College, Salt Road, Balasore, Orissa, India; AND M. C. DASH, School of Life Sciences, Sambalpur University, Burla 768019, Orissa, India.

Received for publication 13 June 1991; revised and accepted 3 January 1993.

Journal of the Lepidopterists' Society
47(3), 1993, 247-248

A "HEATHII" ABERRATION OF *MITOURA GRYNEA SWEADNERI*
(LYCAENIDAE: THECLINAE)

Additional key words: Florida, phenotype.

Various types of wing pattern aberrations are known for the Theclinae, including a recurring phenotype with greatly exaggerated white maculation on the ventral wing surfaces. Fletcher (1903, 1904) misinterpreted such an aberrant female specimen of *Satyrium calanus falacer* (Godart) as a new species, describing it as *Thecla heathii*. Ironically, Fletcher soundly discounted the possibility that *T. heathii* represented an aberration of a known thecline, remarking "I can hardly think that it is a suffused albinic variety of any of them." Aberrant individuals of the Theclinae which possess exaggerated ventral white pattern elements are thus loosely termed "heathii" aberrations. A number of North American and European "heathii" phenotypes have been figured in the literature (e.g., Frohawk 1938, Muller 1976, Fisher 1976, Russwurm 1978, Baggett 1983, Ferris 1992). Fisher (1976) figured a "heathii" aberration of *Mitoura grynea castalis* (W. H. Edwards) from Texas. Ferris (1992) discussed and figured "heathii" aberrations of a related species of *Mitoura* (attributed to *barryi* Johnson). A "heathii" aberration of the Floridian subspecies *M. g. sweadneri* F. H. Chermock is herein reported for the first time.

On 23 September 1992, a male "heathii" phenotype of *M. g. sweadneri* (Figs. 1 & 2) was captured on the blossoms of *Bidens alba* (L.) DC (Asteraceae) at Yankeetown, Levy Co., Florida. The dorsal wing surfaces of the individual appear normal. In contrast, the ventral wing surfaces are extremely modified and asymmetrical. The postmedian bands of the forewings are reduced to several indistinct triangular subapical spots. The white postmedian bands of the hindwings are broken into rows of rounded spots in cells Cu_2 , Cu_1 and M_3 . These spots are surrounded by the remnants of the inner red bands. The red and white linear markings normally present in cells $2A$ are entirely lacking. Between veins M_3 and $SC+R_1$, the postmedian bands are enlarged and fused, becoming most pronounced in cells $SC+R_1$. The marginal white lines on the hindwings are expanded inwardly and transformed into rounded patches. In addition, the hindwings are disproportionately small in size. The ventral hindwing pattern of the aberrant *M. g. sweadneri* is similar in configuration to the "heathii" of *M. g. castalis* figured by Fisher (1976).

Fisher (1976) briefly speculated on the genetic and/or physical origin of the "heathii" aberration. Ferris (1992) suggested that this type of aberration may be the result of the expression of a homologous allele found in many theclines. Nijhout (1991) proposed that all the aberrations figured by Russwurm (1978), including two "heathii" phenotypes, are probably the result of temperature shock rather than recurring mutation. Environmental stress, such as temperature shock, has been shown to produce a variety of pattern aberrations (see Nijhout 1991). Additional research is required to more fully understand the cause of this intriguing abnormality.



FIGS. 1, 2. *Mitoura grynea sweadneri* (ventral). 1, male "heathii" aberration, Levy Co., Florida, 23 September 1992; 2, normal male, Hernando Co., Florida, 2 September 1989 (both leg. J. V. Calhoun).

The aberrant specimen of *M. g. sweadneri* is deposited in my personal collection in Dunedin, Florida.

I would like to thank two anonymous reviewers for helpful comments on the manuscript.

LITERATURE CITED

- BAGGETT, H. D. 1983. What is it? *The Ohio Lepidopterist* 5:16.
- FERRIS, C. D. 1992. Appearance of the "heathii" aberration and genetic variation in a *Mitoura* population from Oregon (Lycaenidae:Theclinae). *J. Res. Lepid.* 30:113-120.
- FISHER, M. S. 1976. The heathii-white banding aberration in the Strymoninae (Lycaenidae). *J. Res. Lepid.* 15:177-181.
- FLETCHER, J. 1903. Descriptions of some new species and varieties of Canadian butterflies. *Trans. Royal Soc. Can.* 9:207-216.
- 1904. Descriptions of some new species and varieties of Canadian butterflies. *Can. Entomol.* 36:121-130.
- FROHAWK, F. W. 1938. *Varieties of British butterflies*. Ward, Lock & Co. Ltd., London, England. 200 pp.
- MULLER, J. 1976. Aberrant species of New Jersey Lepidoptera. *J. Res. Lepid.* 15:144-145.
- NIJHOUT, H. F. 1991. *The development and evolution of butterfly wing patterns*. Smiths. Inst. Press, Washington, D.C. 297 pp.
- RUSSWURM, A. D. A. 1978. *Aberrations of British butterflies*. E. W. Classey, Ltd., Oxon, England. 151 pp.

JOHN V. CALHOUN, 1731 San Mateo Drive, Dunedin, Florida 34698, Research Associate, Florida State Collection of Arthropods, Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida.

Received for publication 18 December 1992; revised and accepted 28 March 1993.